DEPARTMENT OF TRANSPORTATION
DIVISION OF ENGINEERING SERVICES
Office of Structural Materials
Quality Assurance and Source Inspection

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Contract #: 04-0120F4
Cty: SF/ALA Rte: 80 PM: 13.2/13.9
File #: 1.28

WELDING INSPECTION REPORT

Resident Engineer: Siegenthaler, Peter
Address: 333 Burma Road
City: Oakland, CA 94607

Report No: WIR-024442
Date Inspected: 18-Jun-2011

Project Name: SAS Superstructure
Prime Contractor: American Bridge/Fluor Enterprises, a JV
Contractor: American Bridge/Fluor Enterprises, a JV

OSM Arrival Time: 900
OSM Departure Time: 1530
Location: Job Site

CWI Name:	M. Johnson, J. Cayabyab			**CWI Present:**	☑ Yes	☐ No	
Inspected CWI report:	☐ Yes	☑ No	☐ N/A	**Rod Oven in Use:**	☑ Yes	☐ No	☐ N/A
Electrode to specification:	☑ Yes	☐ No	☐ N/A	**Weld Procedures Followed:**	☑ Yes	☐ No	☐ N/A
Qualified Welders:	☑ Yes	☐ No	☐ N/A	**Verified Joint Fit-up:**	☑ Yes	☐ No	☐ N/A
Approved Drawings:	☑ Yes	☐ No	☐ N/A	**Approved WPS:**	☑ Yes	☐ No	☐ N/A
				Delayed / Cancelled:	☐ Yes	☑ No	☐ N/A

Bridge No: 34-0006
Component: Tower

Summary of Items Observed:

At the start of the shift the Quality Assurance Inspector (QAI) traveled to the project site and observed the work and the inspection performed by American Bridge/Fluor Enterprises (AB/F) personnel. The inspection was performed on the various field fit-up of weld joints and the multi-pass fillet welding. The welding was performed utilizing the Flux Cored Arc Welding (FCAW).

A). West Tower Shaft/ Splice Plates

The QAI observed the multi-pass fillet welding of the west corner splice plates located at the 114 meter elevation and identified as WN: 166. The welding was performed by Salvador Sandoval ID-2202 utilizing the FCAW process as per the WPS identified as ABF-WPS-D15-F2200-2 and F2200-3, Rev. 0. The WPS was also used by the QC inspector, Steve Jensen, to perform the in process weld inspection utilizing the WPS to monitor the welding and to verify the welding parameters. The welding and the inspection appeared to comply with the contract specifications.

Later in the shift, at the request of the QC inspector, the QAI performed a visual inspection of the fillet welding of the upper and lower splice plates identified as WN: 165 and WN: 166 located at the west corner of the tower shaft. The QA inspection was performed to verify the welds and the QC inspection performed meet the requirements of the contract specifications. At the conclusion of the inspection QAI concurs with the QC assessment.

B). North Tower Shaft/Splice Plates

The QAI observed the multi-pass fillet welding of the north corner splice plates located at the 114 meter elevation and identified as WN: 166. The welding was performed by Salvador Sandoval ID-2202 utilizing the FCAW process as per the WPS identified as ABF-WPS-D15-F2200-2 and F2200-3, Rev. 0. The WPS was also used by the QC inspector, William Sherwood, to perform the in process weld inspection utilizing the WPS to monitor the welding and to verify the welding parameters. The welding and the inspection appeared to comply with the contract specifications.

The QAI also observed the installation, fit-up and tack welding of the splice plates located at the northeast corner of the North Tower Shaft. This task was performed by the fitter/welder Mike Jiminez ID-4671 utilizing the FCAW-G process as per the WPS ABF-WPS-D15-F2200-3 and F2200-2, Rev.0. The fit-up and tack welding was completed during this scheduled shift.

C). QC Preliminary UT of ESW

The QAI also observed the Ultrasonic Testing (UT) of the tower shear plate T-joint identified as WN: N-045. The testing was performed by the QC technician Jesse Cayabyab utilizing a G.E./Krautkramer USM 35X. The examination of the of the CJP was conducted utilizing UT procedure identified as SE-UT-D1.5-CT-100 Rev.4. This procedure has not been approved as of this report date to perform testing on ESW. The QC technician performed the required longitudinal wave technique, utilizing a 1.0" diameter transducer, to perform the examination for base metal soundness and the shear wave technique for the examination of weld soundness which was performed utilizing a 16mm x 19mm rectangular transducer. At the conclusion of the testing two rejectable indications were noted by the QC technician. The dimensions are as follows: #1 indication; Y=800 mm, d=45 mm, L=130 mm and #2 indication; Y=3096 mm, d=45 mm and L=30 mm.

This QA Inspector also performed a daily review and update of the field document control tracking records regarding the Orthotropic Box Girders, Longitudinal and Transverse "A" Deck Stiffeners and Deck Access Holes.

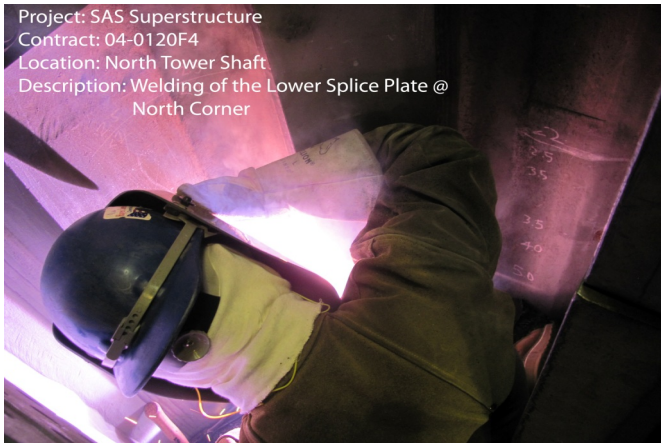
QA Summary

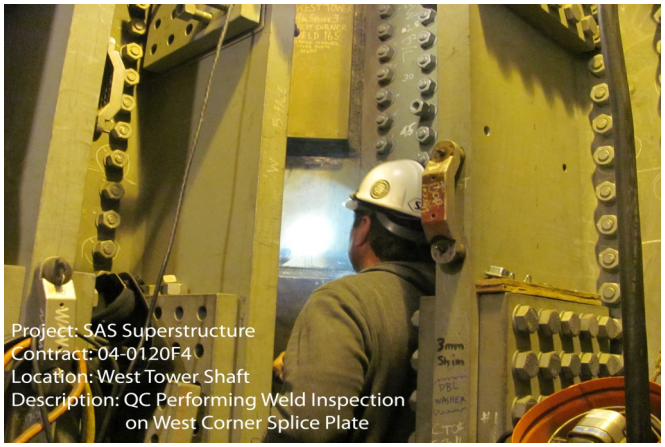
The welding was performed in the overhead and horizontal fixed positions utilizing the E71T-1 consumables. The WPS's were also utilized by the QC inspector's as a reference to monitor the welding operation, verify the welding parameters and verify the minimum preheat and the interpass temperatures. The welding parameters and surface temperatures were verified by the QC inspector's utilizing a Fluke 337 clamp meter for the electrical welding parameters and Tempil Heat Indicators for verifying the preheat and interpass temperatures. At the time of the observation no issues were noted by the QAI.

The digital photographs on page 3 of this report illustrate some of the work observed during this scheduled shift.

WELDING INSPECTION REPORT

(Continued Page 3 of 3)





Summary of Conversations:

There were general conversations with Quality Control Lead Inspector, Mike Johnson, at the start of the shift regarding the location of welding, inspection and N.D.E. testing personnel scheduled for this shift.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy (510) 385-5910, who represents the Office of Structural Materials for your project.

Inspected By:	Reyes,Danny	Quality Assurance Inspector
Reviewed By:	Levell,Bill	QA Reviewer